



AHS Montréal –Ottawa Chapter



invites you to presentations on the subject of

**Augmented Visionics System (AVS) to Aid
Flight Operations in Degraded Visual
Environments**

by

Sion Jennings

Research Officer, Flight Mechanics and Avionics - NRC

and

Gilles Laflamme

Director, Mission Solutions, CAE



**Wednesday April 21st at 6:00 pm
Le St-Martin Hotel, Laval, Quebec**

Veillez prendre note que la presentation sera faite en anglais

Place:	Le St-Martin Hotel 1400 rue Maurice Gauvin, Laval, Québec H7S 2P1 Tel: (450) 902-3000 1-866-904-6835	
Date:	Wednesday April 21st, 2010	
Agenda:	17h30-18h00	Registration
	18h00-19h00	Supper
	19h00-19h40	Sion Jennings
	19h40-20h20	Gilles Laflamme
	20h20-20h30	Closing remarks
Cost:	AHS member	\$ 35
	Non-member	\$ 45
	Student	\$ 25
	Parking at the hotel is free for those attending this event	
RSVP:	Space is limited, so please book your seat ASAP (at the latest by <u>Wednesday 14th April, 2010</u>). Register with: Andrew Sayer - asayer@bellhelicopter.textron.com - (450) 971 6500 x2597	

About the subject:

Operational experience during recent foreign military deployments indicate that flight crews of rotary-wing and tilt-wing aircraft operating at low altitudes have insufficient usable visual cues to manoeuvre safely in severely degraded visual environments (DVE), e.g., “brown out” or “white out.” The result is loss of Situation Awareness (SA) and increased mishap rates. The proposed solution is an Augmented Visionics System (AVS) that fuses data from onboard sensors with an onboard terrain and obstacle database to present rich and accurate visual cues to the pilot. AVS will provide military and civilian pilots with suitable cuing to maintain geospatial awareness, assess landing zone suitability, detect and avoid obstacles, and conduct safe flight transition to touchdown. Additional benefits would include the capability to maintain safe aircraft separation, en-route navigational support and obstacle avoidance during low-level transit. CAE, with support from Neptec Design Group and the National Research Council of Canada, has undertaken to develop and test an AVS. This presentation will summarize the AVS concept and show some results of the integrated AVS flight trials conducted in Ottawa in August 2009 and in Yuma (Arizona, USA) in January 2010.